

REMARKS

The Office Action dated February 6, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1 and 3-5 have been amended to more particularly point out and distinctly claim the subject matter of the invention. New claims 10-26 have been added further defining the scope of the present invention. Support for new claims 10-24 may be found, at least, in FIGS. 3 and 4 and corresponding description. Support for new claims 25 and 26 may be found, at least, in FIG. 1 and corresponding description. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1-5 and 10-26 be found allowable as reciting patentable subject matter.

Claims 1-5 and 10-26 are pending and under consideration.

OBJECTIONS TO THE CLAIMS:

Claims 1 and 5 were objected to for minor informalities. Claims 1 and 5 have been amended to correct such minor informalities. Accordingly, it is respectfully requested that the objections to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 112:

Claim 4 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Specifically, the Office Action found insufficient antecedent support for “said control center device,” recited in claim 4. In response, claim 4 has been amended to recite “said control center,” thereby in compliance with 35 U.S.C. § 112, second paragraph.

Accordingly, it is respectfully requested that the 35 U.S.C. § 112, second paragraph, rejection of claim 4 be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

Claims 1, 2, and 4 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,466,984 to Naveh in view of Blight, “Policy-based networking architecture for QoS interworking in IP management-scalable architecture for large scale enterprise-public interoperation.” The Office Action took the position that Naveh and Blight describe all the recitations of independent claim 1 and related dependent claims. This rejection is traversed and reconsideration is requested.

Claim 1, upon which claims 2-5 depend, recites a system, including a controller configured to administrate multi-radio access mobile networks and to control a behavior of the multi-radio access mobile networks. An information model is implemented in the controller which describes different Quality-of-Service mechanisms including attributes which are involved in each function under policy to represent manageable parameters of specific network implementations. Functions under policy include admission control for

new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control. The system further includes a processor configured to form a set of policy rules based on the information model. The set of rules defines actions to be executed in dependency of an occurrence of conditions. The system includes a policy based management device configured to receive the set of rules for the implementation thereof. The device includes a plurality of policy based radio resource management devices each configured to respectively manage the parameters of specific network implementations, and a translation function device configured to translate the rules into a form executable by the plurality of policy based radio resource management devices.

In accordance with an embodiment of the present invention, a central policy server is provided which impacts all QoS impacting functions (See, for instance, paragraph [0009] of the specification providing that: “... *a centralized control point is offered which administrates the network in order to achieve a consistent service behavior for the need of a specific Quality-of-Service. That means that all Quality-of-Service related functions distributed in the radio access network could be managed from a central point of administration*” (emphasis added)). In addition, the present invention provides radio resource management functions.

Further, the “wide” approach of the present invention may, for instance, be appreciated from paragraph [0012] of the specification, where the QoS parameters are described which are intended to be managed according to the present invention. In

particular, those include “*functions like admission control for new Radio Access Bearers (RAB) and Radio Bearers (RB) or a dynamic configuration of the packet scheduler, the load control or of quality control parameters*” which are “*radio resource management (RRM) functions of different radio technology*”.

As will be discussed below, Naveh and Blight, whether considered alone or in combination, fail to disclose or suggest the elements of any of the presently pending claims, and therefore fail to provide the advantages and features discussed above.

Naveh generally describes a method and apparatus for policy-based management of quality of service treatments of network data traffic flows by integrating policies with application programs are described. The method involves creating one or more mappings, each mapping representing an abstract policy and associating a pre-determined network quality of service with a traffic flow type of the flow of information and with an application program. See column 5, lines 25-30. The method also includes determining one or more processing policies, which include creating and storing one or more policy statements in a repository. See column 6, lines 9-15. Each policy statement is represented by a plurality of nodes that represent a condition of one of the traffic flows, an operator, an operand, and an action comprising one of the quality of service treatments.

Blight describes a QoS interworking in IP management, in light of scalability analysis of large-scale interworking of policy based networking (PBNs).

Although Naveh generally submits that a schema stored in the repository provides an integration point and a common information model for communication between Application 608 and Policy Server 604 (See column 9, lines 18-67), Naveh is silent as to teaching or suggesting, at least, “wherein an information model is implemented in said controller which describes different Quality-of-Service mechanisms including attributes which are involved in each function under policy to represent manageable parameters of specific network implementations, wherein functions under policy include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control,” as recited in independent claim 1. Instead, a policy server 604 provides a mechanism by which a network administrator or manager may map application parameters into network services. The policy server 604 is coupled to one or more network devices 620, each of which executes a network device operating system 622. The policy server 604 configures the network devices 620 to implement the network services and to correctly respond to signaling from Application 608. There is no teaching or suggestion in Naveh that the policy server 604 defines functions under policy to include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control as in the present invention.

Furthermore, Naveh does not provide any description or suggestion a controller (control center) having an information model implemented which takes into account the above recited functions. Likewise, Naveh does not teach or suggest an interrelated

apparatus configured to receive a set of rules according to such an information model, translating the same and actually managing respective parameters. Rather, Naveh simply describes that a mapping translates single application QoS requirements into policies or requests that are centrally coordinated and in compliance with network-wide multi-application policies. There is no teaching or suggestion in the cited reference that the mapping is configured to translate “rules into a form executable by a plurality of policy based radio resource management devices,” “where the set of rules defines actions to be executed in dependency of an occurrence of conditions,” as recited in independent claim 1.

Blight, in turn, does not cure the deficiencies of Naveh. While Blight generally discusses an application including an information model, no description or suggestion can be found in Blight that provides that the information model includes “functions under policy include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control,” as recited in independent claim 1.

Accordingly, based on the descriptions of Naveh and Blight, a person skill in the art would not be able to achieve the specific features and effect provided by the present invention. Specifically, the combination of Naveh and Blight would not provide a most general policy based QoS management in multi-radio access mobile network systems, would not be able to achieve an information model in which functions under policy

include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control.

Therefore, a combination of Naveh and Blight fails to teach or suggest all the features recited in independent claim 1. It respectfully requested that dependent claim 1 and related dependent claims be allowed. For similar reasons, it is respectfully requested that independent claims 10, 13, 14, 17, 18, 21, 22, and 25-26 and related dependent claims be allowed.

Claims 3 and 5 were rejected under 35 U.S.C. § 103 as being unpatentable over Naveh in view of Blight and further in view of U.S. Patent No. 7,082,102 to Wright ("Wright"). The Office Action took the position that Naveh, Blight, and Wright describe all the recitations of claims 3 and 5. This rejection is traversed and reconsideration is requested.

Dependent claims 3 and 5 depend from independent claim 1. Because the combination of Naveh, Blight, and Wright must teach, individually or combined, all the recitations of the base claim and any intervening claims of dependent claims 3 and 5, the arguments presented above supporting the patentability of independent claim 1 over Naveh and Blight are incorporated herein.

Wright generally describes systems and methods for policy-based management of a multiprotocol label switching network. In Wright, a system includes a policy-based network administration system, and the policy-based network administration system

includes a plurality of policies. The system also includes an MPLS network, which is coupled to the policy-based network administration system.

Similarly to Naveh and Blight, Wright fails to disclose or suggest, at least, “an information model is implemented in said controller which describes different Quality-of-Service mechanisms including attributes which are involved in each function under policy to represent manageable parameters of specific network implementations, *wherein functions under policy include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control,*” emphasis added, as recited in independent claim 1. Wright does not introduce or convey the particular features of the information model, plurality of policy based radio resource management devices, and the translation function device of independent claim 1. Rather, plurality of policies in Wright do not include functions include admission control for new radio access bearers and radio bearers, and/or a dynamic configuration of a packet scheduler and/or a load control as in independent claim 1. The combination of Naveh, Blight, and Wright would not teach or suggest the particular claimed features of independent claim 1.

Therefore, Applicant respectfully submits that the 35 U.S.C. 103 rejection based on Naveh, Blight, and Wright is improper as these references do not teach or suggest each of the elements of independent claim 1 and related dependent claims 3 and 5. It respectfully requested that independent claim 1 and related dependent claims 3 and 5 be allowed.


CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1-5 and 10-26 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Respectfully submitted,


Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:dc

Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
Check No. 18947